

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AND INTERCONNECT AT THE INTERSECTION OF US 1 (BALTIMORE AVE) AND I-95 / I-495 OUTER LOOP OFF RAMP / IKEA WAY IN PRINCE GEORGE'S COUNTY. THE MODIFICATION WILL UPGRADE EXISTING PEDESTRIAN SIGNALS ACROSS THE SOUTH AND EAST LEGS TO AUDIBLE TACTILE PEDESTRIAN PUSHBUTTONS AND COUNTDOWN PEDESTRIAN SIGNALS. IT WILL ALSO ADD AUDIBLE TACTILE PEDESTRIAN PUSHBUTTONS AND COUNTDOWN PEDESTRIAN SIGNALS TO THE WEST LEG CROSSING. US 1 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

- THE INTERSECTION OPERATES IN A NEMA FIVE (5) PHASE, FULLY-ACTUATED MODE. NORTHBOUND AND SOUTHBOUND US 1 OPERATE CONCURRENTLY. A PEDESTRIAN PHASE ACROSS I-95 / I-495 OUTER LOOP (OL) OFF RAMP OPERATE CONCURRENTLY WITH NORTHBOUND US 1. A NEW PEDESTRIAN PHASE ACROSS IKEA WAY SHALL BE ADDED TO OPERATE CONCURRENTLY WITH SOUTHBOUND US 1. LEFT TURNS ARE PROHIBITED FROM SOUTHBOUND US 1, AND ALL TURNS ARE PROHIBITED FROM NORTHBOUND US 1. THE OL OFF RAMP OPERATES AS A SPLIT PHASE, AND IKEA WAY OPERATES AS A TRIPLE RIGHT TURN ONLY TOWARDS SOUTHBOUND US 1 AND I-95 / I-495 OUTER LOOP ON RAMP. AN OVERLAP PHASE IS PROVIDED FOR THE I-95 / I-495 OUTER LOOP OFF RAMP WHICH OPERATES CONCURRENTLY WITH IKEA WAY. AN ALTERNATE PEDESTRIAN PHASE WITH AUDIBLE PEDESTRIAN SIGNALS SHALL BE PROVIDED TO CROSS US 1 CONCURRENT WITH THE OL OFF RAMP.
- AN EXISTING NEMA FULL-TRAFFIC-ACTUATED, EIGHT (8) PHASE CONTROLLER WITH VIDEO DETECTION INTERFACE, AND ALL NECESSARY EQUIPMENT IN A NEMA SIZE "6" BASE MOUNTED CABINET SHALL BE UTILIZED AT THIS LOCATION. 2 WIRE CENTRAL CONTROL UNIT SHALL BE INSTALLED BY THE CONTRACTOR.

III. SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:
TO CROSS US 1 (BALTIMORE AVE)

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS BALTIMORE AT I-95 RAMP AND IKEA. WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS I-95 RAMP

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS I-95 RAMP AT BALTIMORE. WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS IKEA WAY (CURBSIDE)

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS IKEA AT BALTIMORE. CROSSWALK ANGLES LEFT. SECOND PUSHBUTTON IN MEDIAN. WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS IKEA WAY (MEDIAN ISLAND)

- WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE: "WAIT TO CROSS IKEA AT BALTIMORE. CROSSWALK ANGLES LEFT. WAIT."
- WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
9571	7 SF	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
	3 EA	R10-3(1) IKEA Way (9"x15")
	2 EA	R10-3(1) I-95 Ramp (9"x15")
	2 EA	R10-3(1) Baltimore Ave (9"x15")

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2001	7 CY	CLASS 2 EXCAVATION
2002	4 CY	TEST PIT EXCAVATION
5001	4 EA	REMOVAL OF EXISTING PERMANENT PAVEMENT MARKINGS SYMBOLS OR LEGENDS
5002	40 LF	5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS
5003	625 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	490 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	210 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	420 LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	830 SF	5 INCH CONCRETE SIDEWALK
6003	105 SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8001	3 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8005	1 EA	ADJUST HANDHOLE TO GRADE WITH NEW FRAME AND COVER
8008	7 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	7 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8016	6 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8017	33 EA	LED SIGNAL HEAD MODULES (ANY SIZE)
8024	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8040	135 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8042	7 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	185 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8055	1800 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8057	1740 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL MODIFICATIONS.

CONTACTS

DISTRICT (DISTRICT 3 - PRINCE GEORGE'S)

MR. BRIAN YOUNG
DISTRICT ENGINEER
301-513-7311

MS. FELECIA MURPHY
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-513-7404

MR. VICTOR GRAFTON
DISTRICT UTILITY ENGINEER
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MR. KEVIN NOWAK & MR. DUANE BERNARD
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
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MR. VERNON STINNETT
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. EDWARD RODENHIZER
CHIEF, SIGNAL OPERATIONS SECTION
410-787-7650

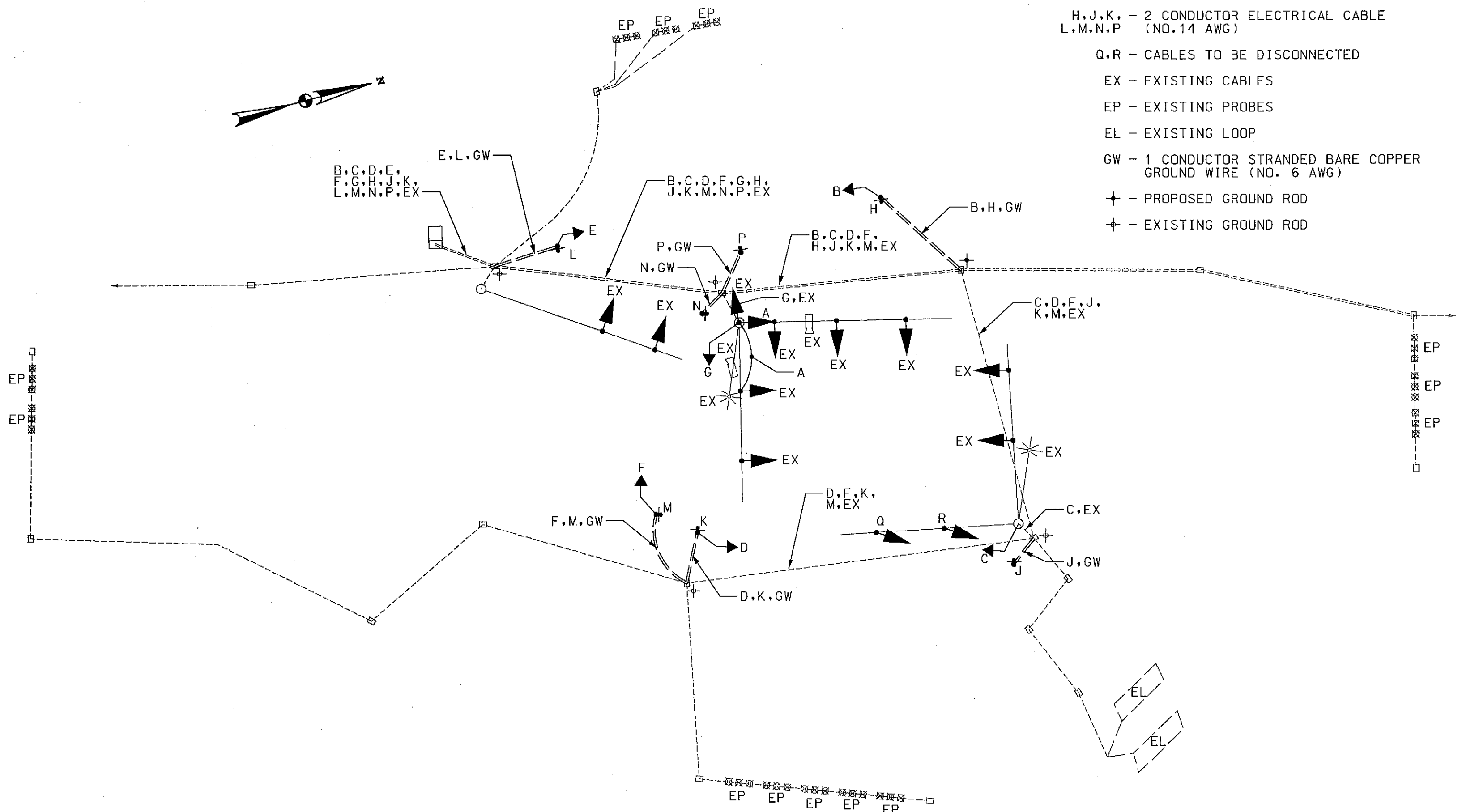
MR. EUGENE BAILEY
CHIEF, SIGN OPERATIONS SECTION
410-787-7670

MR. MICHAEL STOCKER
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7696

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 AND 6	G	G	G	G	G	-R	-R	-R	R	R	R	WK	WK	WK	WK	DW	DW
PED CLEAR /COUNTDOWN	G	G	G	G	G	-R	-R	-R	R	R	R	FLOW	FLOW	FLOW	FLOW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	-R	-R	-R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3 AND OVERLAP	R	R	R	R	R	-R	-R	-R	G-G	G	G-G	DW	DW	DW	DW	DW	DW
3 AND OVERLAP CHANGE	R	R	R	R	R	-R	-R	-R	Y	Y	Y-G	DW	DW	DW	DW	DW	DW
PHASE 4 AND OVERLAP	R	R	R	R	R	-G	-G	-G	R	R	R-G	DW	DW	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	-Y	-Y	-Y	R	R	R-Y	DW	DW	DW	DW	DW	DW
PHASE 4 ALT. AND OVERLAP	R	R	R	R	R	-G	-G	-G	R	R	R-G	DW	DW	DW	DW	WK	WK
PED CLEAR /COUNTDOWN	R	R	R	R	R	-G	-G	-G	R	R	R-G	DW	DW	DW	DW	FLOW	FLOW
4 ALT. CHANGE	R	R	R	R	R	-Y	-Y	-Y	R	R	R-Y	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	-FLR	-FLR	-FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING KEY

A,B,C - 5 CONDUCTOR ELECTRICAL CABLE
(NO. 14 AWG)

H,J,K - 2 CONDUCTOR ELECTRICAL CABLE
(NO. 14 AWG)

Q,R - CABLES TO BE DISCONNECTED

EX - EXISTING CABLES

EP - EXISTING PROBES

EL - EXISTING LOOP

GW - 1 CONDUCTOR STRANDED BARE COPPER
GROUND WIRE (NO. 6 AWG)

+ - PROPOSED GROUND ROD

+ - EXISTING GROUND ROD

TOD NO: XX439-07
SHA NO: PG995B53
US 1 @ IKEA Entrance/I-495 North Ramp

**PARSONS
BRINCKERHOFF**

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SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

US 1 (BALTIMORE AVE) AT I-95/I-495 OL /IKEA WAY
PEDESTRIAN SIGNAL MODIFICATION
COLLEGE PARK, MD

GENERAL INFORMATION SHEET

SCALE: N.T.S. DATE: JANUARY 15, 2012 CONTRACT NO.: XX4395185

DESIGNED BY: MF COUNTY: PRINCE GEORGE'S

DRAWN BY: MF LOGMILE: 16000106.53

CHECKED BY: KMP TMS NO.: L039

F.A.P. NO.: TOD NO.:

TS NO. 3130E-GI DRAWING: SG-03 OF 03 SHEET NO. 3 OF 3